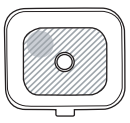
PHOTO-ELECTRONIC SMOKE ALARM

FOR DOMESTIC USE

INSTRUCTIONS

This leaflet contains vital information on the operation and installation of your Smoke Alarm. Please read carefully and retain for future use. If you are just installing the unit this leaflet MUST be given to the householder.



Ei 105B	**Ei 2105B**	**Ei 3105B**
Standard Models		
Ei 105C	Ei 2105C	Ei 3105C
Models with Interconnect		
Ei 105H	Ei 2105H	Ei 3105H
Models with Hush		
Ei 105CH	**Ei 2105CH**	**Ei 3105CH.**
Models with Interconnect & Hush		

1. BASIC INFORMATION ABOUT YOUR SMOKE ALARM

A Smoke Alarm is an early warning device. Installing Smoke Alarms can give you and your family valuable extra time to escape.

Note:-

- Install as close to the centre of the ceiling as possible.
- Press the Test Button weekly.
- Replace the battery once a year or when the Alarm beeps once every minute and the red light flashes at the same time.
- If the Alarm beeps without the LED flashing at the same time the unit must be cleaned.
- A Smoke Alarm does not prevent fires.
- Plan your escape route.
- Proper protection may require more than one Smoke Alarm.
- If you have any questions or doubts about Smoke Alarms contact the supplier or your local Fire Brigade.

2. LOCATING SMOKE ALARMS

Sufficient smoke must enter the Smoke Alarm before it will respond. Your Smoke Alarm needs to be within 10 paces (7.5 metres) of the fire to respond quickly. It also needs to be in a position where its alarm can be heard throughout your home, so it can wake you and your family in time for you all to escape. A single Smoke Alarm will give some protection if it is properly installed, but most homes will require two or more to ensure that a reliable early warning is given. For maximum protection you should put individual Smoke Alarms in all the rooms where fire is most likely to break out (except bathroom and kitchen).

Your first Smoke Alarm should be located between the sleeping area and the most likely sources of fire (living room or kitchen for example). But it should not be more than 10 paces (7.5 metres) from the door to any room where a fire might start and block your escape from the house.

Important: This Smoke Alarm is only suitable for domestic use.

Recommended locations, Figures 1, 2, & 3

for minimum protection

- on each storey
- in each sleeping area
- every 7.5 metres of hallways & rooms
- within 3 metres of all bedroom doors

for maximum protection
in every room (except bathrooms and kitchens)

Figure 1: Single storey dwelling

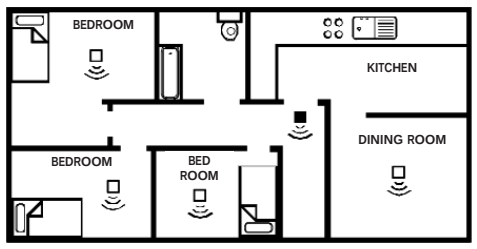


Figure 2: Single storey dwelling with separate sleeping areas

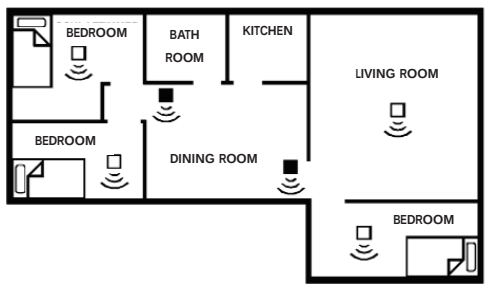
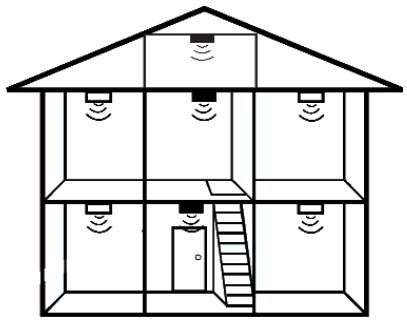


Figure 3: Multi Storey Dwelling



a) Single Storey Dwelling
If the home is on one level (a bungalow or mobile home for example) you should put the first Smoke Alarm in a corridor or hallway between the sleeping and living areas. Place it as near to the living area as possible, but make sure you can hear it loudly enough to wake a person in the bedrooms. (See Figure 1)

If your bungalow is very large and the corridor or hallway is more than say 22 paces (15 metres) long, one Smoke Alarm will not be sufficient. This is because no matter where it is located it will be more than 7.5 metres from potential fires.

In houses with more than one sleeping area, Smoke Alarms should be placed between each sleeping area and the living area. (For example, see Figure 2)

b) Multi Storey Dwellings
If your home is on more than one level the best place for your first Smoke Alarm is in the downstairs hallway near the stairs. (For example, see Figure 3). This is because smoke is likely

to be detectable in the hallway before it reaches the upstairs landing and bedrooms. Your second Smoke Alarm should be upstairs, because the downstairs Smoke Alarm is unlikely to detect the smoke from a fire in a bedroom upstairs. We strongly recommend that Smoke Alarms are fitted on each story.

c) Maximum Protection
For maximum protection you should put individual Smoke Alarms in all the rooms where fire is most likely to break out, (apart from kitchens, bathrooms etc., see "Locations to Avoid"). The living room is the most likely place for a fire to start at night, followed by the kitchen and then the dining room. You should also consider putting Smoke Alarms in any bedrooms where fires might occur, for instance, where there is an electrical appliance such as an electric blanket or heater, or where the occupant is a smoker. You could also consider putting Smoke Alarms in any rooms where the occupant is unable to respond very well to a fire starting in the room, such as an elderly or sick person or a very young child.

d) Checking you Can Hear your Smoke Alarm
With the Smoke Alarm sounding in its intended location, check you are able to hear it in each bedroom with the door closed, above the sound of your radio. The radio should be set to a reasonably loud conversation level. If you can't hear it over your radio the chances are that it wouldn't wake a person.

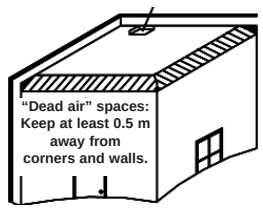
If a Smoke Alarm is too far away for it to wake you, it is best to interconnect it to another Smoke Alarm near the bedroom. A maximum of twelve Smoke Alarms may be interconnected (See page 1 for the model numbers of Smoke Alarms with interconnect), so that all interconnected Alarms respond when one Alarm senses smoke (see page 9 for further details).

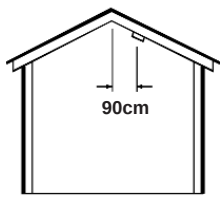
3. POSITIONING YOUR SMOKE ALARM

Position your Smoke Alarm to comply with applicable building regulations.

Figure 4 **Figure 5**

Ideal: Centre of the ceiling





a) Ceiling Mounting
Hot smoke rises and spreads out, so a central ceiling position is the preferred location. The air is "dead" and does not move in corners, therefore Smoke Alarms must be mounted away from corners.
Place the unit at least 0.5 m from any light fitting or decorative object which might obstruct smoke entering the Smoke Alarm. Keep at least 0.5 m away from walls and corners. (see Figure 4)

Wall mounting is not recommended for Smoke Alarms.

b) Mounting on a Sloping Ceiling
In areas with sloping or peaked ceilings install your Smoke Alarm 90 cm from the highest point measured horizontally, because "dead air" at the apex may prevent smoke from reaching the unit.

c) Locations to Avoid
Don't place your Smoke Alarm in any of the following areas:

- **Bathrooms, kitchens, shower rooms, garages** or other rooms where the Smoke Alarm may be triggered by steam, condensation, normal smoke or fumes. Keep at least 6 m away from potential sources of fumes.
- **Attics** or other places where extremes of temperature may occur (below 4oC or above 40oC).
- Near a **decorative object, door, light fitting, window moulding** etc., that may prevent smoke from entering the Smoke Alarm.
- Surfaces that are normally **warmer** or **colder** than the rest of the room (for example attic hatches, uninsulated exterior walls etc). Temperature differences might stop smoke from reaching the unit.
- Next to or directly above **heaters or air conditioning vents, windows, wall vents** etc. that can change the direction of airflow.
- In very high or awkward areas where it may be **difficult to reach** the Alarm (for testing, battery replacement etc).
- Locate unit at least 1.5m and route wiring at least 1 m away from **fluorescent light fittings** as electrical "noise" and/or flickering may affect the unit.
- Locate the unit at least 1 metre from **dimmer controlled lights and wiring** - some dimmers can cause interference.

- Locate away from very **dusty** or **dirty** areas as dust build-up in the chamber can make unit too sensitive and prone to alarm. It can also block the insect screen mesh and prevent smoke from entering the smoke detector chamber.
- Do not locate in **insect infested** areas. Small insects getting into the smoke detector chamber can cause intermittent alarms.

d) Nuisance/False Alarms
If, when the Alarm goes off, there is no sign of smoke, heat or noise to indicate that there is a fire, you should get your family into a safe place, before you start investigating.
Check the entire house/apartment carefully in case there is a small fire smouldering somewhere.
Check whether there is some source of smoke or fumes, for example cooking fumes being drawn past the Smoke Alarm by an extractor.
If there are frequent nuisance/false Alarms it may be necessary to relocate the device away from the source of the fumes.

Fanning vigorously with a newspaper or similar will help silence the Alarm by removing smoke from the sensing chamber.

4. INSTALLING YOUR SMOKE ALARM

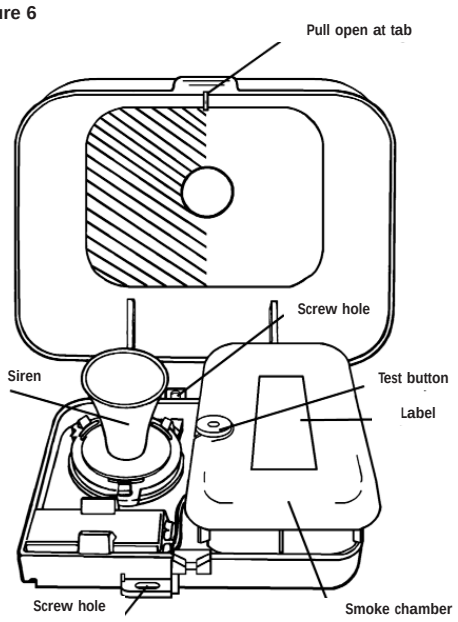
a) The Smoke Alarm is battery powered with no need for electrical wiring (unless units are being interconnected, see page 9).

1. Pull cover open at tab. Do not remove the base from the back of the Smoke Alarm.

2. Find a suitable location, place the base of the Smoke Alarm against the ceiling and mark the position of the screw holes with a pencil.

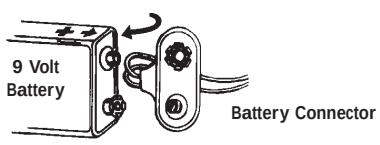
3. Taking care to avoid any electrical wiring in the ceiling drill two holes through the centres of the marked locations, insert wall plugs and screw the unit into place.

Figure 6



b) Connecting the Battery
Using a pencil, note the date you inserted the battery on the inside of the base for future reference. Remove the battery from the battery holder and connect to the battery connector, (see Figure 7).

Figure 7



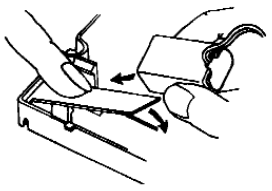
The Ei Electronics Smoke Alarm is fitted with a battery connector to make connecting the battery safer.

Check the Smoke Alarm as outlined on page 8.

c) Safety Lock
All models are fitted with a warning flag (safety interlock), which pops up preventing the cover from being closed when no battery is inserted. When inserting or replacing a battery the flag must be pushed down into the battery holder.

(See Figure 7 (a)).

Figure 7a



WARNING: Smoke Alarms do not function without a battery.

5. LOOKING AFTER YOUR SMOKE ALARM

a) Automatic Self-Test
The smoke chamber automatically tests itself every 40 seconds. If the chamber is degraded the unit will beep, without the LED flashing at the same time. If this happens clean the unit.

b) Checking the Smoke Alarm
It is recommended that you test your Smoke Alarm at least once a week to be sure the unit is working properly. Press and hold the Test Button until the Alarm sounds (it may take up to 10 seconds), (see Figure 8). It will also help you and your family to become familiar with the sound of the Alarm.

Figure 8

c) Replacing the Battery
Fresh batteries should last about one year. When the battery is nearly depleted and needs to be replaced the unit beeps once a minute for at least 30 days. The alarm will stop beeping when the battery has been replaced. Also replace the battery if pressing the test button does not cause the Alarm to sound. For maximum reliability, replace the battery at least once a year.

Insert the new battery as soon as possible to ensure proper functioning of the unit. Leakage could cause damage to the Alarm, furniture, and carpeting.
A flashing light every 40 seconds (without the unit beeping) does **not** mean that the battery needs to be replaced.

Note: Also check proper functioning of the Smoke Alarm after re-occupation following a holiday etc. by pressing the test button.

For replacement batteries, refer to the label on the smoke chamber.

WARNING: The use of other batteries could have a detrimental effect on the Smoke Alarm.

d) Cleaning your Smoke Alarm
Smoke Alarms are not excessively prone to dust and insect ingress but should still be cleaned from time to time. Use the narrow nozzle attachment of your vacuum cleaner to remove dust, insects and cobwebs. To clean the cover, wipe with a damp cloth.

WARNING: Do not paint your Alarm.

Apart from the maintenance and cleaning described in this leaflet, no other customer servicing of this product is required. Repairs, when needed, must be performed by the manufacturer.

All Smoke Alarms are prone to dust and insect ingress which can cause false alarms or failure to alarm.

In order to keep contamination to a minimum, the latest design, up-to-date materials and methods are used in the production of this Alarm. However, it is impossible to completely eliminate the effect of dust and insect contamination, and therefore, to prolong the life of the Alarm you must ensure that it is kept clean so that excess dust does not build up. Any insects or cobwebs in the vicinity of the Smoke Alarm should be promptly removed.

In certain circumstances even with regular cleaning, contamination can build up in the smoke sensing chamber causing the alarm to sound or fail. If this happens the Alarm must be returned to us for servicing or replacement. Contamination is beyond our control, it is totally unpredictable and is considered normal wear and tear. For this reason, contamination is not covered by the guarantee and a charge is made for servicing such units.

If there are frequent nuisance/false alarms in certain locations you should consider moving the alarm.

6. SMOKE ALARMS WITH INTERCONNECT

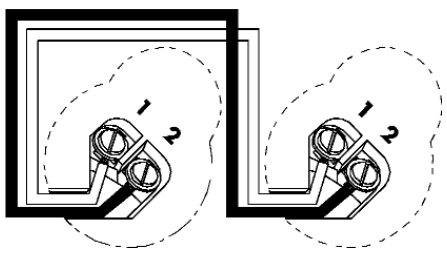
A maximum of twelve Smoke Alarms may be interconnected so that all Alarms respond when one Alarm senses smoke. (For the model numbers of Smoke Alarms with Interconnect see page 1). This ensures that the alarms will be heard everywhere within the building.

WARNING: Do not connect EI Smoke Alarms to any device apart from those listed on page 1 - this includes units from other manufacturers.

A maximum of 250 m metres (820 ft) of wire can be used (maximum resistance between detectors 50 ohms). The units are interconnected by wiring all the terminals marked '1' together, and all the terminals marked '2' together as in Figure 9. Draughts from wiring openings, conduit, or mounting boxes/holes, may blow smoke away from the sensing chamber, making it insensitive. It is essential that all such openings be closed by silicone sealant or similar.

After wiring together the Interconnect Smoke Alarms, test the first unit by pressing the button. All alarms should sound within 10 seconds. The red light should flash every second only on the unit that is being tested. Check all the other units similarly.

Figure 9



Smoke Alarms with Interconnect

7. HUSH FEATURE

These Smoke Alarms should be interconnected only within the confines of a single family living unit. If they are connected between different units there may be excessive nuisance alarms. Not everybody may be aware that the Alarm is being tested or that it is a nuisance alarm caused by cooking etc. Some models have a hush feature (see page 1) to help you control nuisance/false alarms.

1. To cancel a false alarm, press the test button. The alarm will automatically switch to a reduced sensitivity condition. This condition allows unwanted alarms to be silenced for a period of approximately 10 minutes. The red light will flash every 10 seconds (instead of 40 seconds) to let you know the unit has been silenced.
2. The unit will reset to normal sensitivity at the end of the silenced period. If additional silenced time is required, simply

push the test button again.
3. If the cause of the alarm is not clear, it should be assumed that it is due to an actual fire and the dwelling should be evacuated immediately.

If kitchen or bathroom usage/layout is such that there is an unacceptable level of nuisance alarms, re-locate the Smoke Alarm further away where it will be less affected by cooking fumes, steam etc.

8. IMPORTANT SAFEGUARDS

When using household protective devices, basic safety precautions should always be followed, including those listed below:

Read all instructions carefully.

Rehearse emergency escape plans so everyone knows what to do in case the alarm sounds.

For replacement batteries, refer to the label inside the Smoke Alarm.

NOTE: Constant exposure to high or freezing temperatures may reduce the life of the battery.

Do not disconnect the battery to stop alarm sounding. (Fanning vigorously with a newspaper or similar will remove nuisance smoke from the Smoke Alarm and stop it sounding).

Do not attempt to recharge or burn batteries, as they may explode. Depleted batteries should be discarded properly.

When removing the battery, handle carefully to avoid possible eye damage or skin irritation from a leaking or corroded battery.

To maintain sensitivity to smoke, do not paint or cover Smoke Alarms in any manner; do not permit any accumulation of cobwebs, dust or grease.

If the unit has been damaged in any way or does not function properly, do not attempt a repair. Return Smoke Alarm to the manufacturer (see "Getting your Smoke Alarm Serviced", page 14).

This appliance is intended for domestic household use only.

This is not a portable product. It must be permanently mounted following the instructions.

Smoke Alarms are no substitute for insurance. The supplier or manufacturer is not your insurer.

9. LIMITATIONS OF SMOKE ALARMS

- Smoke Alarms combined with Heat Alarms can significantly reduce the number of fire fatalities.
- However, independent authorities have stated that they may be ineffective in some circumstances. There are a number of reasons:
- Smoke Alarms will not work if the batteries are depleted or if they are not connected properly, or if the wrong type of battery is used. Test regularly and replace batteries at least yearly or when depleted.
- Alarms will only detect fire if sufficient smoke or heat reaches the alarm's sensors. Smoke may be prevented from reaching the Alarm if the fire is too far away, for example, if the fire is on another floor, behind a closed door, in a chimney, in a wall cavity, or if the prevailing air draughts carry the smoke away.
- Installing Smoke Alarms on both sides of closed doors and installing more than one Smoke Alarm as recommended in this leaflet very significantly improves the probability of early detection.
- The Alarm may not be heard.
- A Smoke Alarm may not wake a person who has taken drugs or alcohol.
- Smoke Alarms may not detect every type of fire to give sufficient early warning. They are particularly ineffective with: fires caused by smoking in bed, escaping gas, violent explosions. poor storage of flammable rags and/or liquids, (for example petrol, paint, spirits etc), overloaded electrical circuits, arson, children playing with matches, for example.
- Smoke Alarms do not last indefinitely.

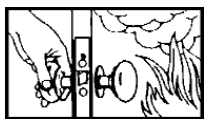
The manufacturer recommends a regular weekly check and replacement of the unit after 10 years as a precaution.

9. PLANNING YOUR ESCAPE FOR WHEN THE ALARM GOES

Use the Alarm test button to familiarise your family with the Alarm sound and to practice fire drills regularly with all family members to rehearse evacuating the building as fast as pos-

sible. Draw up a floor plan that will show each member at least 2 escape routes from each room in the house. Children tend to hide when they don't know what to do. Teach children how to escape, open windows, and use roll up fire ladders and stools without adult help. Make sure they know what to do if the Alarm goes off.

1. Check room doors for heat or smoke. Do not open a hot door. Use an alternate escape route. Close doors behind you as you leave.



2. If smoke is heavy, crawl out, staying close to floor. Take short breaths, if possible, through a wet cloth or hold your breath. More people die from smoke inhalation than from flames.

3. Get out as fast as you can. Do not stop for packing. Have a prearranged meeting place outside for all family members. Check everybody is there.

4. Call the Fire Brigade from a neighbour's house. Remember to give your name and address.

5. **NEVER** re-enter a burning house.

FIRE SAFETY HINTS
Store petrol and other flammable materials in proper containers. Discard oily or flammable rags.

Always use a metal fireplace screen and have chimneys cleaned regularly. Replace worn or damaged sockets, switches, home wiring, and cracked or frayed electrical cords and plugs.

Do not overload electrical circuits.
Keep matches and lighters away from children.

Never smoke in bed. In rooms where you do smoke, always check under cushions for smouldering cigarettes and ashes.

Service central heating systems regularly.

Be sure all electrical appliances and tools have a recognised approval label.

Contact the local authorities or the Fire Brigade for further information.

10. GETTING YOUR SMOKE ALARM SERVICED

If your Smoke Alarm fails to work after you have read the sections on "Connecting the Battery" and "Looking after your Smoke Alarm" contact Customer Assistance at the nearest address given at the end of this leaflet. You can also return the unit to the manufacturer (see below for addresses). State the nature of the fault, where the Smoke Alarm was purchased and include proof of purchase.

11. GUARANTEE (LIMITED)

Ei Electronics guarantees this product against any defects that are due to faulty material or workmanship for a five year period (battery not included) from date of purchase. (EI Electronics guarantees the products EI 2105B, 2105C, 2105H and 2105CH for two years only). This guarantee only applies to normal conditions of use and service, and does not include damage resulting from accident, neglect, misuse, unauthorised dismantling, or contamination howsoever caused. If this product has become defective it must be returned to EI Electronics (see "Getting Your Smoke Alarm Serviced") with proof of purchase. If the product has become defective during the guarantee period the manufacturer will repair or replace the unit without charge. This guarantee excludes incidental and consequential damage.

Do not interfere with the product or attempt to tamper with it. This will invalidate the guarantee. This guarantee is in addition to your statutory rights.

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